REMARKS

Claims 1, 7, 8, 14 and 15 are pending and have been examined in the present application.

The objection to the title is noted. In response, the title has been amended so as to be more descriptive of the claimed invention. Approval of the amended title is respectfully requested.

Claims 1, 7, 14 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 2004/0209136 to Ren et al. in view of U.S. Patent Publication No. 2004/0001991 to Kinkelaar et al. (Kinkelaar '991) and U.S. Patent Publication No. 2004/0001993 to Kinkelaar et al. (Kinkelaar '993). Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ren et al in view of Kinkelaar '991 and Kinkelaar '993, and further in view of U.S. Patent No. 6,808,838 to Wilson. Applicants respectfully traverse these rejections.

Among the limitations of independent claim 1 which are neither disclosed nor suggested in the prior art of record is a solid electrolyte fuel cell having an evaporation inhibiting layer that is made of a woven or unwoven fabric containing a specific type of fibrous cellulose having a volume expansion coefficient of 4.5 or less and initiating water migration from the evaporation inhibiting layer to the cathode at a temperature of 80°C or lower, and has a porosity of 70 to 90%.

There are many benefits that the inventors have discovered with the use of a fibrous cellulose having the volume expansion, water migration and porosity properties defined in claim 1. For example, and as described in the present specification at page 6, line 19 to page 7, line 2, the use of such a specific type of fibrous cellulose is advantageous in that destruction of an MEA due to excessive expansion of the evaporating inhibiting layer can be avoided, and excessive drying of the cathode can be prevented while maintaining the capability of adsorbing or absorbing water.

Ren et al. modified by Kinkelaar '991 and Kinkelaar '993 does not disclose an evaporation inhibiting layer that is made of a woven or unwoven fabric containing a fibrous cellulose having a volume expansion coefficient of 4.5 or less and initiating water migration from the evaporation inhibiting layer to the cathode at a temperature of 80°C or lower, and has a porosity

of 70 to 90%. It is contended, however, that such properties are inherent in the materials disclosed in Ren et al., Kinkelaar '991 and Kinkelaar '993. Applicants respectfully disagree, and submit that a *prima facie* case of obviousness has not been presented.

When "relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The Office Action admits that the features of volume expansion coefficient of 4.5 or less and initiating water migration from the evaporation inhibiting layer to the cathode at a temperature of 80°C or lower are not disclosed by either reference, but asserts that the required basis in fact and/or technical reasoning has been presented in that Ren, Kinkelaar '991 and Kinkelaar '993 use the same material (namely cellulose) as Applicants. It is respectfully submitted that this assertion is not tenable because it necessarily assumes that all cellulose has these properties, and there is no factual basis for that assumption.

It is well known that the particular properties of any given material can vary greatly and depend on many factors such as, for example, material density and type and amount of fillers or additives. Thus, reference to a woven or unwoven fabric containing a fibrous cellulose does not mean that a specific species of material having a suitable volume expansion coefficient and specific water migration properties at 80°C or lower are disclosed. Nowhere has an attempt been made to show that the materials disclosed in Ren et al., Kinkelaar '991 and Kinkelaar '993 allude to having "a volume expansion coefficient of 4.5 or less and initiating water migration from the evaporation inhibiting layer to the cathode at a temperature of 80°C or lower" or recognize that such material properties are important. Instead, they are deemed to do so based on silence and that is not permissible. "Silence does not provide a factual basis on which a conclusion of obviousness may be drawn" *In re Burt*, 148 USPQ 548, 553 (CCPA 1966); accord, ***In re Newell***, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989). If silence cannot provide a factual basis for obviousness, it certainly cannot provide a factual basis for the certainty required when inherency is alleged. The required basis in fact and/or technical reasoning does not exist.

Moreover, the cited portions of Kinkelaar '993 relate to gas diffusion layers 13 and 13A. These gas diffusion layers are different than the evaporation inhibiting layer defined in independent claim 1. Specifically, the gas diffusion layers 13 and 13A of Kinkelaar '993 are adjacent the anode 15 and cathode 15A, respectively. The gas diffusion layer 13A adjacent the cathode 15A "helps to remove water from the cathode side of the fuel cell to prevent flooding, and allows air or other desired gaseous oxygen source to contact the cathode side to ensure oxygen continues to reach the active sites." The gas diffusion layer 13A also "preferably wicks the water from the cathode by capillary action." See Kinkelaar '993 at paragraph [0045].

In contrast, the evaporation inhibiting layer defined in independent claim 1 not only removes water from the cathode, but also supplies water to the cathode when the water content becomes too low, thus inhibiting evaporation. See page 5, lines 23-27 of the specification. Thus, the gas diffusion layer of Kinkelaar '993 is not the same as the evaporation inhibiting layer defined in independent claim 1. Therefore, even if one were to combine the teaching of Ren et al., Kinkelaar '991 and Kinkelaar '993, one would not arrive at the present invention as defined in independent claim 1.

Wilson does not remedy any of the deficiencies of Ren et al., Kinkelaar '991 and Kinkelaar '993. Wilson does not disclose or suggest an evaporation inhibiting layer having a volume expansion coefficient of 4.5 or less and initiating water migration from the evaporation inhibiting layer to the cathode at a temperature of 80°C or lower and a porosity of the evaporation inhibiting layer of 70 to 90%, as specifically required by independent claim 1. Therefore, even if one were to combine the teaching of Ren et al., Kinkelaar '991, Kinkelaar '993 and Wilson, one would not arrive at the present invention as defined in independent claim 1.

Claims 7, 8, 14 and 15 depend either directly or indirectly from independent claim 1 and include all of the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the art of record. Accordingly, claims 7, 8, 14 and 15 are likewise patentable.

In view of the foregoing, favorable consideration and allowance of the present application with claims 1, 7, 8, 14 and 15 is respectfully and earnestly solicited.

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